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TESTIMONY OF  
MICHAEL J. DEWOLF, RONALD HOMENICK, VALERIE LEFLER, DANA JENSEN,  
PHILIP THOR, AND KELLY KINTZ

Witnesses for Bonneville Power Administration

**SUBJECT: Revenue Requirement Study**

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3 PHILIP THOR, AND KELLY KINTZ  
4 Witnesses for Bonneville Power Administration  
5

6 **SUBJECT: REVENUE REQUIREMENT STUDY**

7 **Section 1. Introduction and Purpose of Testimony**

8 *Q. Please state your names and qualifications.*

9 A. My name is Michael DeWolf and my qualifications are contained in WP-02-Q-BPA-16.

10 A. My name is Ronald Homenick and my qualifications are contained in WP-02-Q-BPA-30.

11 A. My name is Valerie Lefler and my qualifications are contained in WP-02-Q-BPA-43.

12 A. My name is Dana Jensen and my qualifications are contained in WP-2-Q-BPA-32.

13 A. My name is Philip Thor and my qualifications are contained in WP-02-Q-BPA-66.

14 A. My name is Kelly Kintz and my qualifications are contained in WP-02-Q-BPA-36.

15 *Q. Please state the purpose of your testimony.*

16 A. The purpose of this testimony is to sponsor the development of generation revenue  
17 requirements for the generation function of the Federal Columbia River Power System  
18 (FCRPS). The documents covered by this testimony consist of the Revenue Requirement  
19 Study, WP-02-E-BPA-02 and the Documentation for the Revenue Requirement Study  
20 (in two volumes), WP-02-E-BPA-02A and WP-02-E-BPA-02B.

21 *Q. How is your testimony organized?*

22 A. Overall, our testimony addresses significant changes in the projections, assumptions, and  
23 methods used to determine revenue requirements and to demonstrate cost recovery since  
24 Bonneville Power Administration's (BPA) 1996 general rate filing. First, we address  
25 changes to forecasted expenses since Issues '98. Then, our testimony discusses the  
26 implementation of the Fish and Wildlife Funding Principles (the Principles) in revenue

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Witnesses: Michael J. DeWolf, Ronald Homenick, Valerie Lefler, Dana Jensen,  
Philip Thor, and Kelly Kintz

1 requirements and other aspects of this rate proposal. Next, our testimony addresses the  
2 Treasury Payment Probability (TPP) standard that is being implemented in this rate  
3 proposal. Fourth, we outline our proposal for the Dividend Distribution Clause (DDC), a  
4 mechanism that entails rebates to firm power customers and “distributions” to other  
5 stakeholders in the event financial reserves build to levels higher than needed to meet the  
6 TPP standard. Finally, the testimony addresses minor changes to the functionalization of  
7 various expenses and capital costs as well as potential adjustments to the Final Rate  
8 Proposal.

9 **Section 2. Changes to Forecast of Expenses**

10 *Q. Has BPA’s forecast of expenses changed since the last expense forecast was issued in the*  
11 *Fall of 1998 at the conclusion of Issues ‘98?*

12 A. Yes. The forecast at the conclusion of Issues ‘98 included average annual expenses of  
13 \$1,869 million for the generation function in fiscal years (FY) 2002-2006. *See* Revenue  
14 Requirement Study, WP-02-E-BPA-02, Appendix A. Revenue requirements in this rate  
15 proposal include average annual expenses of \$2,358 million, an increase of \$489 million  
16 over the Issues ‘98 forecast and \$264 million over 1996 revenue requirements.

17 *Q. Please identify the factors that led to the increase in average annual expenses over the*  
18 *Issues ‘98 forecast.*

19 A. Three key factors led to the increase in expenses over the Issues ‘98 forecast:  
20 (1) implementation of the Subscription Strategy and expense changes resulting from the  
21 revenue requirements and rates development process; (2) implementation of the  
22 Principles; and (3) an adjustment to the estimate of savings needed to fulfill the  
23 objectives of the cost review.

1 Q. Are the changes in these three areas consistent with implementation of the cost review  
2 and Issues '98 recommendations?

3 A. Yes. The Issues '98 forecast incorporated BPA's commitment to achieve expense  
4 savings equivalent to the \$131 million average annual total the cost review had  
5 recommended, with the exception of \$7 million in savings associated with  
6 recommendation No. 9, which would require legislation to improve administrative  
7 effectiveness and efficiency. *Id.*

8 The Issues '98 forecast, however, also recognized two key areas that would have  
9 to be developed and finalized in the context of the power rate case:

- 10 a. Fish and wildlife funding amounts shown in Issues '98 did not include operational  
11 costs (i.e., power purchases related to fish and wildlife recovery) and did not  
12 reflect averages of the range of system configuration alternative costs for  
13 operation and maintenance (O&M) and capital called for in the Principles  
14 (see Appendix 1-3 of Cost Review Implementation Plan in the Revenue  
15 Requirement Study, WP-02-E-BPA-02; and
- 16 b. Several cost components subject to change in the revenue requirements and rates  
17 development process, namely, short-term power purchase expense, net costs of the  
18 Residential Exchange Program, General Transfer Agreement (GTA) costs, Federal  
19 interest and depreciation, and inter-business line expenses. *Id.*

20 The expenses associated with these two key areas were "earmarked" by the cost  
21 review and Issues '98 as subject to change. As explained more fully below, changes in  
22 these two areas account for \$438 million of the \$489 million increase in forecasted  
23 expenses. Adjusting these costs to reflect the results of the Subscription Strategy,  
24 the Principles, and the revenue requirements and rates development process is consistent  
25 with the commitments made in the cost review and Issues '98, and raises no issues with  
26 regard to the wisdom and merits of decisions resulting from those two public processes.

1           The remaining adjustments were necessary to correct the estimate of savings  
2 required to meet the cost review recommendations and to account for the fact that  
3 additional savings through enhanced administrative efficiencies depend on legislation  
4 that has not been enacted. With these corrections, the savings incorporated in this  
5 revenue requirements from expense reductions associated with the cost review  
6 recommendations are \$113 million, a difference of \$18 million from the \$131 million  
7 originally forecasted. As indicated below, this difference is due to excluding the savings  
8 of recommendation No. 9 (Legislation to improve administrative effectiveness:  
9 \$7 million) and the correction to savings estimates associated with recommendation  
10 No. 8 (Administrative and other internal services costs: \$11 million).

11           In addition to these changes, there are also miscellaneous adjustments totaling  
12 \$39.7 million. These are outlined in "Updates of Forecast of Generation Expenses" in  
13 Appendix A of the Revenue Requirement Study (WP-2-E-BPA-02).

14 *Q. Please explain more specifically why implementation of the Subscription Strategy and*  
15 *related updates are factors leading to an increase in expenses.*

16 *A.* As explained above, the cost review and Issues '98 earmarked certain expenses as subject  
17 to change in the revenue requirements and rates development process. These earmarked  
18 items included short-term power purchases, the net costs of the Residential Exchange  
19 Program, GTA costs, Federal interest and depreciation, and inter-business line expenses.

20           The Subscription Strategy, as explained in the Testimony of Burns, *et al.*,  
21 WP-02-E-BPA-08, results in higher expense estimates for system augmentation and  
22 balancing purchases (short-term power purchases) as BPA supplements its existing firm  
23 power inventory to meet proposed firm power sales. These purchases in this revenue  
24 requirement are forecasted at \$476 million, an increase of \$397 million over the  
25 Issues '98 forecast.

1           The Subscription Strategy also proposes a settlement of the Residential Exchange  
2 Program for investor-owned utilities (IOU) that includes both power sale and a financial  
3 component. The Issues '98 expense forecast for Residential Exchange costs did not  
4 consider possible settlement of the Residential Exchange Program, but instead assumed  
5 implementation of the traditional Residential Exchange Program via "in lieu" sales only.  
6 The increase in costs of \$53 million average per year represents the financial component  
7 of the settlement, calculated as the difference between BPA's five-year flat block market  
8 forecast to purchase 800 average megawatts and the rate paid by the IOUs for their  
9 Subscription power purchases. *See* Doubleday, *et al.*, WP-02-E-BPA-18. Combined, the  
10 Subscription Strategy system augmentation and the IOU settlement account for \$450  
11 million of the revenue requirements increase.

12           As noted in Issues '98 documentation, other costs are determined in final form  
13 only through the process of developing rates. Estimates of these costs--including  
14 Power Business Line (PBL) wheeling expenses under GTAs and the amount and  
15 projected cost of inter-business line transactions--have been updated for this initial rate  
16 proposal, resulting in an expense reduction of \$93 million. *See* DeClerck, *et al.*,  
17 WP-02-E-BPA-26, and Homenick, *et al.*, WP-02-E-BPA-27.

18           BPA also has included the expenses and revenues of energy efficiency activities  
19 in revenue requirements. This change increases expenses by \$10 million, with an  
20 offsetting increase in revenues of \$13 million.

21 *Q. Please explain why implementation of the Principles is a factor leading to an increase in*  
22 *expenses.*

23 *A. For the cost review and Issues '98 forecasts of expenses, BPA excluded operational costs*  
24 *for fish and wildlife recovery (short-term power purchases) and included the O&M and*  
25 *capital investment costs of a single, relatively low-cost, system configuration alternative.*  
26 *As BPA noted at the time, the Issues '98 forecast did not include the averages of alternative*

O&M and capital investment estimates as called for in the Principles. *See* Chapter 13 and Appendix A of the Revenue Requirement Study, WP-02-E-BPA-02. Because the average O&M and capital investment costs of the 13 Fish and Wildlife Alternatives are higher than the single, low-cost alternative that BPA used in the cost review and Issues '98, expense estimates in the revenue requirements are higher (average annual increase of \$71 million).

*Q. Why is the forecast of the U.S. Army Corps of Engineers (COE) O&M higher than in the cost review and Issues '98?*

*A.* The savings target for the COE and Bureau of Reclamation (Reclamation) O&M that was recommended by the cost review and reflected in Issues '98 effectively required that expenses (or equivalent revenue enhancements) be managed to 1996 actual levels. This savings target was an aggregate target for not only the hydro generation portion of COE O&M, but also the fish and wildlife recovery O&M portion. The revenue requirements merges the cost review recommendation and Principle No. 2, *Id.*, by setting the hydro generation portion of COE O&M at 1996 levels and the fish and wildlife recovery portion at the levels called for in the Principles. The increase in fish and wildlife expenses as a result of incorporating the Principles increases average annual expenses for COE O&M by \$22 million.

*Q. Please explain the adjustments to the cost review recommendations and why they are a factor in increased expenses.*

*A.* In Issues '98, BPA committed to achieve savings through expense reductions equivalent to the total of \$131 million recommended by the cost review, with one exception. Recommendation No. 9 called for \$7 million in savings to power through legislation to improve administrative effectiveness and efficiency. These savings have not been included in revenue requirements pending reasonable assurance that such legislation will be enacted.

A technical correction needs to be made to the cost review's estimate of savings for internal administrative and support service costs. The cost review recommended that these

1 costs be reduced to 50 percent of 1996 actual levels. The cost review estimated that the  
2 annual average reduction needed to achieve this 50 percent level was \$31.7 million,  
3 resulting in an expense level for these costs of \$25.1 million, with the generation function  
4 portion being \$6.9 million.

5 The cost review's estimate of the savings needed to achieve the 50 percent target  
6 was overstated. Actual 1996 costs for these activities are estimated at \$80 million,  
7 meaning that the target for internal administrative and support services costs in  
8 FY 2002 - 2006 should be \$40 million, not the \$25.1 million shown in the cost review.  
9 Making this correction, and using the revised overhead allocation methodology  
10 (see Section 6 of this testimony), the spending level in revenue requirements is an average  
11 of \$17.6 million per year for FY 2002 - 2006, an increase of \$10.8 million over the cost  
12 review and Issues '98 projections.

### 13 **Section 3. Implementation of Fish and Wildlife Funding Principles**

14 *Q. What guidance is BPA following in setting rates to recover prospective fish and wildlife*  
15 *costs?*

16 *A.* BPA is implementing the Principles in this rate proposal. The Principles were adopted in  
17 the Fall of 1998 after extensive regional discussion and coordination with concerned  
18 executive branch agencies. They were announced by Vice President Al Gore.  
19 See Volume 1, Chapter 13, Attachment 2 of Documentation for Revenue Requirement  
20 Study, WP-02-E-BPA-02A. The Principles define the fish and wildlife costs that BPA  
21 should assume, establish the cost recovery goal that BPA should pursue, and outline the  
22 risk mitigation measures that BPA should implement in its rate and Subscription processes.  
23 See the Principles at Attachment 1, *Id.*



1 Q. *The Principles refer to a range of \$438 to \$721 million annually for fish and wildlife costs*  
2 *in FY 2002 - 2006. What are the components of this range of fish and wildlife costs?*

3 A. The Principles describe the range as “the current calculation of the five-year average  
4 financial impact on BPA of 13 long-term Alternatives being evaluated in the region for  
5 configuration of the FCRPS.” In addition, the range includes estimated costs of the “. . .  
6 NWPPC’s Fish and Wildlife Program to protect, mitigate, and enhance fish and wildlife  
7 on the Columbia River and its tributaries.” *Id.* The 13 Fish and Wildlife Alternatives are  
8 defined in Volume 1, Chapter 13, Attachment 5 of Documentation for Revenue  
9 Requirement Study, WP-02-E-BPA-02A.

10 The components of the range are:

- 11 a. Expenses for the Fish and Wildlife O&M activities of the COE, Reclamation, the  
12 U.S. Fish and Wildlife Service (USFWS) (for the Lower Snake River Hatcheries),  
13 and the NWPPC;
- 14 b. Expenses for recovery of invested capital depreciation and interest expenses for  
15 historical and projected fish and wildlife investments of COE, Reclamation, and  
16 BPA;
- 17 c. Expenses for BPA’s own fish and wildlife program (formerly referred to as “BPA  
18 direct program O&M”);
- 19 d. Operational impacts of fish mitigation, in particular, replacement power purchases  
20 and estimated foregone revenues due to limitations on system operations for fish  
21 and wildlife mitigation.

22 When the Principles were adopted in the Fall of 1998, operational impacts were  
23 estimated assuming a 20-mill market price for short-term power purchases and foregone  
24 revenues. This range is increased in this rate proposal to \$430-\$780 million due to a  
25 higher forecast of market prices.

**Average Annual Costs for 13 Fish and Wildlife Alternatives**  
(\$ millions)

<b>Alternatives</b>	<b>Other Entities' O&amp;M</b>	<b>BPA Fish Wildlife O&amp;M*</b>	<b>Capital Recovery Expenses</b>	<b>Operational Impacts</b>	<b>Total</b>
1. In-River Migration (low options)	49.3	178.8	141.6	180.0	549.7
2. In-River Migration (high option) w/CWA	51.3	178.8	184.4	161.7	576.2
3. Expanded Transport	52.5	178.8	139.0	175.5	545.8
4. Expanded Transport (low option)	53.0	109.4	124.0	143.8	430.2
5. Transportation Plus	53.7	178.8	142.7	180.0	555.2
6. Transportation Plus and CWA	53.8	178.8	152.8	180.0	565.4
7. Two Snake River Dams to Natural River	45.2	178.8	152.2	267.9	644.1
8. Four Snake River Dams to Natural River	43.9	178.8	151.0	302.7	676.4
9. Snake River & JDA to Natural River	43.9	178.8	145.4	305.5	673.6
10. John Day Dam to Natural River	51.2	178.8	136.0	180.0	546.0
11. John Day Dam to Spillway Crest	52.8	178.8	141.4	180.0	553.0
12. Snake River Dams to natural River and JDA to Spillway Crest	43.9	178.8	150.8	305.6	679.1
13. Snake River Dams to Natural River and JDA to Natural River (high option) plus CWA	39.3	178.8	165.4	397.4	780.9

\* Point estimates for BPA fish and wildlife O&M in revenue requirements average \$139.4 million/year as specified in Principle No. 2.

The range does not take into account 4(h)(10)(C) and Fish Cost Contingency Fund (FCCF) credits. Such credits are treated as revenue, and their annual expected value is estimated at \$89 million and \$22 million, respectively. See Section 5.2.3.4 of the Whole Sales Power Rate Development Study, WP-02-E-BPA-05.

*Q. What are the 13 Fish and Wildlife Alternatives intended to represent?*

A. The 13 Fish and Wildlife Alternatives represent, in the Administration's judgment and based on extensive regional input, a reasonable range within which the costs of eventual decisions on system reconfiguration and related operations can be expected to fall. The 13 Fish and Wildlife Alternatives do not represent all options that currently are being considered, or will be considered, by agencies, tribes, interested parties, and Congress. By the same token, there is no assurance that all 13 of the Alternatives will continue to be

1 considered until a final decision is made. It was well understood at the time the  
2 Principles were adopted that cost estimates would continue to evolve as the analysis,  
3 planning, and decision process for system reconfiguration and related actions progressed.  
4 But the range of costs established by these 13 Fish and Wildlife Alternatives is deemed  
5 by the Executive Branch to be sufficiently high and broad for BPA rate setting and  
6 Subscription purposes.

7 The Principles recognize that BPA is setting wholesale power rates and initiating  
8 Subscription before decisions on system reconfiguration and other recovery actions are  
9 made. For this reason, the Principles are intended to “keep the options open” for future  
10 decisions by:

- 11 a. Specifying that each of the 13 Fish and Wildlife Alternatives should be treated by  
12 BPA as equally likely to occur, meaning that the revenue requirements and risk  
13 analysis should not prejudice, or give probabilistic preference to, one alternative  
14 over another; and
- 15 b. Establishing a high cost recovery goal, expressed as an 88 percent/five-year TPP  
16 goal.

17 In addition, the Principles “do not establish a budget for the 2002 - 2006 period,  
18 and BPA is not picking a single number for the rate case.” *See* Principles in Volume 1,  
19 Chapter 13, Attachment 1 of Documentation for Revenue Requirement Study,  
20 WP-02-E-BPA-02A. Thus, the 13 Fish and Wildlife Alternatives represent a set of  
21 assumptions, a forecasting convention, to establish capital investment and O&M levels,  
22 system operations assumptions, and risk analysis assumptions for purposes of setting  
23 rates.

1 Q. *Fish and Wildlife Funding Principle No. 1 states that "BPA will meet all of its fish and*  
2 *wildlife obligations once they have been established, including its trust and treaty*  
3 *responsibilities." How is Principle No. 1 being implemented in this rate proposal?*

4 A. For purposes of this rate proposal, BPA is implementing Principle No. 1 by ensuring that  
5 rates and risk mitigation measures are sufficient to recover the costs of future decisions  
6 on system configuration and associated operations. This cost recovery objective is  
7 accomplished in two ways:

- 8 • By ensuring that revenue requirements, the repayment schedule, and the risk analysis  
9 take into account the full range of potential fish and wildlife costs represented by the  
10 13 Fish and Wildlife Alternatives, without prejudice of one alternative over another.  
11 As explained below, costs of the 13 Fish and Wildlife Alternatives are treated as if  
12 each were equally likely to occur;
- 13 • by identifying and modeling all significant risks, and by adopting a high standard for  
14 recovering costs on time and in full; and
- 15 • by designing risk mitigation measures that meet the standard.

16 Q. *Explain how identifying and modeling key risks, adopting a high standard for recovering*  
17 *costs, and designing risk mitigation measures to meet the standard helps BPA meet all of*  
18 *its fish and wildlife obligations.*

19 A. BPA's risk exposure includes hydro condition, market price, fish and wildlife recovery  
20 cost, and other risk factors. See Conger, *et al.*, WP-02-E-BPA-15, and the Risk Analysis  
21 Study, WP-02-E-BPA-03. Identifying all significant risks, modeling their relationships,  
22 and quantifying their impacts on net revenues are essential first steps to developing  
23 measures that mitigate the risks and ensure costs are recovered.

24 The risk mitigation tools in this rate proposal are designed to achieve an  
25 88 percent probability that all payments to the U.S. Treasury (Treasury) will be made on  
26 time and in full over the five-year rate period. See Section 4 of this testimony,

1 Lovell, *et al.*, WP-02-E-BPA-14, and Volume 1, Chapter 12 of Documentation for  
2 Revenue Requirement Study, WP-02-E-BPA-02A. This level of TPP is higher than BPA  
3 has implemented in rates since 1993, when BPA adopted an equivalent level of TPP as a  
4 long-term policy standard. *See* Section 4 of this testimony. Implementing the standard  
5 gives a high level of confidence that all costs, including fish and wildlife costs, will be  
6 recovered timely.

7 For BPA to meet its funding obligations for fish and wildlife, it must recover all  
8 of its costs. This is because many fish and wildlife costs and risks are imbedded or  
9 inextricably linked to other costs and risks in the generation function.

10 *Q. Explain how fish and wildlife costs and risks are imbedded in or linked to other costs and*  
11 *risks.*

12 *A.* Fish and wildlife costs pervade the generation function's cost structure and revenue  
13 requirements. Capital investment costs are imbedded in depreciation and interest expense  
14 forecasts and in the repayment schedule. COE, Reclamation, and USFWS O&M costs  
15 for fish and wildlife are imbedded in "Other Entities' O&M" estimates, and the power  
16 purchase component of operational impacts is imbedded in the short-term power  
17 purchases line item.

18 Fish and wildlife costs are uncertain not only because decisions on reconfiguring  
19 the system have not yet been made and the range of costs across the 13 Fish and Wildlife  
20 Alternatives is broad, but also because the costs will be driven in substantial part by  
21 non-controllable variables such as runoff, weather, market prices, and interest rates.  
22 These variables are risk factors not only for fish and wildlife costs, but also for revenues,  
23 power purchases and other cash flow components generally.

1 *Q. What are the sources of funding for fish and wildlife costs that BPA recovers through*  
2 *rates?*

3 A. The sources of funding for the various types of fish and wildlife costs that BPA recovers  
4 through rates are:

- 5 • Capital investments of the COE and Reclamation: Congressional appropriations.  
6 On average, about 77 percent of projected new investment is funded by this source of  
7 capital. Capital appropriations are repaid from power revenues by the end of the  
8 expected service life of the asset, at Treasury market rates of interest;
- 9 • Capital investments of BPA: Bonds issued by BPA to the Treasury. On average,  
10 about 23 percent of new investment is financed by this source of capital. Such bonds  
11 are repaid from power revenues over the life of the bond/asset at interest rates  
12 equivalent to market rates of government corporations;
- 13 • O&M costs of the COE and Bureau: Direct funding agreements with BPA, funded by  
14 current power revenues;
- 15 • O&M costs of the USFWS: Congressional appropriations, reimbursed by BPA  
16 annually from current power revenues;
- 17 • O&M costs of BPA: Current power revenues;
- 18 • Operational impacts (short-term power replacement expenses): Current power  
19 revenues; and
- 20 • Non-power portion of BPA O&M and capital investments: Funded by BPA from  
21 current power revenues and proceeds from bonds issued to Treasury, then recouped  
22 by BPA through 4(h)(10)(C) and FCCF credits.

23 *Q. What implications do missed payments to Treasury have for funding fish and wildlife*  
24 *costs?*

25 A. As shown in the following graph, about 40 percent of fish and wildlife costs take the  
26 form of payments to Treasury. Payments to Treasury for fish and wildlife recovery are,

1 in effect, debt service payments costs to compensate Treasury and Federal taxpayers for  
2 funding that Congress provided earlier through the annual appropriations process, or  
3 through bonds issued by BPA to the Treasury. If BPA misses a payment to Treasury, it  
4 does not mean that funding for fish and wildlife programs or measures is being reduced.  
5 Rather, it means that repayment or reimbursement is delayed for funding that already has  
6 been expended.

7 Fish and wildlife costs that do not take the form of payments to Treasury --  
8 fish-related O&M expenses of the COE, Reclamation, USFWS, NWPPC, and BPA and  
9 replacement power purchases -- are higher in the priority of payments. This means they  
10 would be missed only if a cash shortfall were so great that the full payment to Treasury  
11 had been missed. Inasmuch as payments to Treasury represent the lowest priority in  
12 BPA's priority of payments, the average amount of these payments is large, and the level  
13 of TPP is very high, these higher priority costs are virtually guaranteed to be recovered,  
14 which is to say, the availability of cash to fund these costs is certain.

**About Forty Percent of Fish Costs in Rates Take the Form of Payments to Treasury.  
And About Forty Percent of BPA's Power Payments to Treasury are Related to Fish and Wildlife.**

**Average FYs 2002-2006**

(\$ in millions)

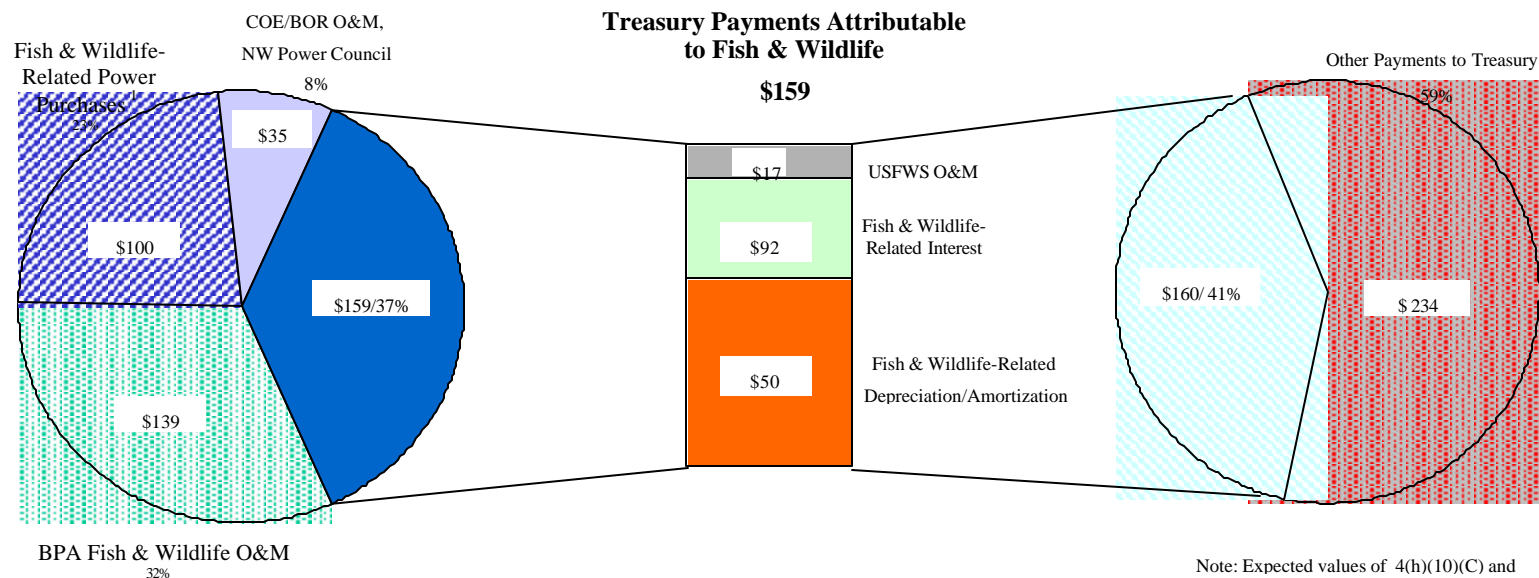
**Fish and Wildlife Expenses in Revenue Requirements**  
**\$433**

(point estimates, not a range)

**Treasury Payments (Power)**

**\$394**

(point estimates, not a range)



Note: Expected values of 4(h)(10)(C) and FCCF revenue credits are \$89 and \$22 million, respectively. These credits serve as a source of cash to meet Treasury payments. They are not reflected in this graph.

<sup>1</sup> Approximation of the power purchases component of the operational impacts of the 13 Fish & Wildlife Alternatives .



1 Q. Principle No. 2 states that "BPA will take into account the full range of potential fish and  
2 wildlife costs." How is Principle No. 2 being implemented in this rate proposal?

3 A. The cost impact of the 13 Fish and Wildlife Alternatives are included in revenue  
4 requirements. This has been done by using a weighted average of the 13 Fish and  
5 Wildlife Alternatives' annual capital investment projections to determine the repayment  
6 schedule and to forecast gross interest and depreciation expense; by using a weighted  
7 average or average of the 13 Fish and Wildlife Alternatives' O&M levels to forecast  
8 FCRPS agency and NWPPC O&M expenses; and by modeling all key risks in the risk  
9 analysis, including market price, hydro condition, and other risks, with the 13 Fish and  
10 Wildlife Alternatives treated as if they are equally likely to occur.

11 Q. What additional direction does Principle No. 2 give on incorporating fish and wildlife  
12 costs in rates?

13 A. Principle No. 2 goes on to say that BPA will incorporate the range "using a method that  
14 calculates probabilities across a range of costs in the same manner as BPA treats other  
15 cost and revenue uncertainties in its rate setting." This involves determining a point  
16 estimate, and reflecting the range of potential costs around the point estimate by using  
17 probabilistic distributions. The probabilities are included in the Non-Operating Risk  
18 Model (NORM) which is described in the Risk Analysis Study, WP-02-E-BPA-03, and  
19 Conger, *et al.*, WP-02-E-BPA-15.

20 Q. Please describe how the point estimates and these probabilities are developed for  
21 revenue requirements.

22 A. BPA develops revenue requirements for the generation function in two phases. The first  
23 phase, which establishes point estimates, is deterministic. The second phase, which  
24 includes the risk analysis and ultimately affects the Planned Net Revenues for Risk  
25 (PNRR) component of revenue requirements is probabilistic.

1 Q. *Please describe Phase 1 of revenue requirements development.*

2 A. The first phase is deterministic because revenue requirements must show expenses as  
3 point estimates, not as ranges. To fulfill Principle No. 2, the revenue requirements  
4 incorporate point estimates representing equal weighting of the 13 Fish and Wildlife  
5 Alternatives as follows:

- 6 • For Other Entities' fish and wildlife O&M expenses, the revenue requirements reflect  
7 budget amounts provided by Reclamation, NWPPC, and the USFWS for the  
8 Lower Snake River Compensation Plan. For COE O&M, the revenue requirements  
9 use the annual weighted average of these costs in the 13 Fish and Wildlife  
10 Alternatives. The amounts for some of the 13 Fish and Wildlife Alternatives reflect  
11 reductions in O&M that would occur due to breaching of certain projects.
- 12 • For COE and Reclamation capital investments, the depreciation and interest included  
13 in revenue requirements and the repayment schedule reflect an annual average of the  
14 plant-in-service of the 13 Fish and Wildlife Alternatives, including the adjusted and  
15 unadjusted schedules for the breaching alternatives involving the lower Snake River  
16 projects. The plant-in-service for dam breaching 13 Fish and Wildlife Alternatives  
17 reflects a reduction in future plant related to additions and replacements in the  
18 powerhouses that would be unnecessary if dams were breached.
- 19 • As specified in Principle No. 2, BPA Fish and Wildlife Program O&M costs are  
20 assumed to have an equal probability of falling anywhere within the current range of  
21 \$100 million to \$179 million. The point estimates included in the revenue  
22 requirements are the annual midpoints between the low and the high cost  
23 Alternatives, which average \$139 million over the five-year period. *See* Volume 1,  
24 Chapter 13 of Documentation for Revenue Requirement Study, WP-2-E-BPA-02A.

For operational impacts, short-term power purchases reflect operation of the FCRPS called for in the 1998 Biological Opinion issued by National Marine Fisheries Service. *See* Conger, *et al.*, WP-02-E-BPA-15.

**Point Estimate Expenses in Revenue Requirements**  
(\$ millions)

	2002	2003	2004	2005	2006	Average
Other Entities' O&M	48	51	51	54	56	52
BPA Fish and Wildlife O&M	132	138	140	143	144	139
Capital Recovery Expenses (Depreciation and Interest)	121	129	141	154	162	142
Replacement Power Purchases (Approximation of this component of operational impacts)	100	100	100	100	100	100
Total	401	418	432	451	462	433

*Q. What is the second phase of revenue requirements determination?*

*A. The second phase is probabilistic, with the following modeling of the range of uncertainty (risk) around the point estimates developed in the first phase described above:*

- The NORM models the probability that the capital investment and O&M costs of the 13 Fish and Wildlife Alternatives, both higher and lower than the average, are equally likely to occur (*see* Lovell, *et al.*, WP-02-E-BPA-14, the Risk Analysis Study, WP-02-E-BPA-03, and the Documentation for Risk Analysis Study, WP-02-E-BPA-03A).
- The NORM samples repeatedly "uniform" distribution of BPA "direct program" O&M expenses from \$100M to \$179M (five-year average).
- The Risk Analysis Model (RiskMod) models the probability that operational costs (including short-term power purchases) of the 13 Fish and Wildlife Alternatives are equally likely. This is accomplished by determining the amounts of generation that would be sold or needed to meet committed loads and multiplying them by forecasted prices. The prices vary over water conditions, across the months of the year and over

1 the five years in the rate period. RiskMod is run separately for each of the 13 Fish  
2 and Wildlife Alternatives, and the results are combined into a single file using equal  
3 weighting for all 13 Fish and Wildlife Alternatives. RiskMod assesses the production  
4 costs of the power system as a whole; it does not separately assess the operational  
5 impacts of fish and wildlife measures. *See* Conger, *et al.*, WP-02-E-BPA-15.

6 Risk mitigation tools, including starting financial reserves, the Cost Recovery  
7 Adjustment Clause (CRAC), FCCF, and PNRR, are then designed to collectively achieve  
8 the TPP goal. *See* Volume 1, Chapter 12 of Documentation for Revenue Requirement  
9 Study, WP-02-E-BPA-02A. The PNRR amount is a component of revenue requirements.

10 *Q. What do Principles No. 3 and No. 4 say?*

11 A. Principles No. 3 and No. 4 give direction on the TPP goal. *See* Section 4 of this  
12 testimony for this discussion.

13 *Q. How are the remaining Principles implemented in the rate proposal?*

14 A. Volume 1, Chapter 13, Attachment 4, of Documentation for Revenue Requirement Study,  
15 WP-02-E-BPA-02A, "How BPA Is Implementing the Principles," summarizes BPA's  
16 implementation of Principles 5-7.

17 *Q. The Principles include funding commitments on the part of the Administration. What are  
18 these commitments?*

19 A. The Principles include commitments that the Administration will extend the availability  
20 of Section 4(h)(10)(C) Treasury payment credits and any remaining FCCF funds through  
21 FY 2006 under the same terms as those established for 1995 through 2001. In addition,  
22 the Administration commits "to support BPA in its Review and revenue enhancement  
23 objectives." *See* Principles in Volume 1, Chapter 13, Attachment 1 of Documentation for  
24 Revenue Requirement Study, WP-02-E-BPA-02A. For a description of terms of access  
25 to the FCCF, *see* Attachment 10 at *Id.*

1 *Q. Are these funding commitments reflected in this rate proposal?*

2 A. Yes. Modeling of 4(h)(10)(C) credits is addressed in Section 5.4.3.2 of the Wholesale  
3 Power Rate Development Study, WP-02-E-BPA-05. Modeling of FCCF access is  
4 addressed in Volume 1, Chapter 12 of Documentation for Revenue Requirement Study,  
5 WP-2-E-BPA-02A. As explained in Section 2 of this testimony, BPA is assuming that  
6 the Review recommendations will be implemented as explained earlier.

7 *Q. Dam breaching is included in five of the 13 Fish and Wildlife Alternatives. What has*  
8 *BPA assumed for project purpose allocations and repayment obligations in the case of*  
9 *these Alternatives?*

10 A. BPA is employing the cost estimates that were developed for the 13 Fish and Wildlife  
11 Alternatives at the time the Principles were adopted. The cost estimates for the breach  
12 alternatives assume that there is no change in the allocation of costs to project purposes  
13 (now average 91 percent power at the four lower Snake projects). *See* Volume 1,  
14 Chapter 13, Attachment 9 of Documentation for Revenue Requirement Study,  
15 WP-02-E-BPA-02A for allocations to project purposes. The cost estimates also assume  
16 that BPA recovers:

- 17 • Existing debt service on repayment obligations;
- 18 • debt service on capital appropriations necessitated by breaching; and
- 19 • costs or replacement power purchases required because of lost generation capacity.

20 These assumptions are made for rate-setting purposes only. They do not represent  
21 a preference or position on BPA's part or the Administration's part. As noted earlier in  
22 this testimony, the 13 Fish and Wildlife Alternatives represent a set of assumptions, a  
23 forecasting convention, to "keep the options open" for eventual decisions on system  
24 reconfiguration and related actions. If dam breaching is chosen as the strategy for  
25 system reconfiguration, Congress presumably would address BPA's repayment  
26 obligations and allocations to project purposes in some manner. Changes in assumptions

1 for the allocations to project purposes and repayment obligations yield very little or no  
2 reduction in revenue requirements for the 2002 - 2006 rate period.

3 **Section 4. Treasury Payment Probability Standard**

4 *Q. What is BPA's adoption of a cost recovery goal in this rate proposal?*

5 A. In this rate proposal, BPA is implementing its long-standing policy standard that risks be  
6 identified and quantified, risk mitigation tools be designed, and rates be set to achieve an  
7 88 percent probability that payments to Treasury be recovered on time and in full over a  
8 five-year rate period. *See* Volume 1 of Documentation for Revenue Requirement Study,  
9 WP-02-E-BPA-02A. By law, BPA's payments to Treasury are the lowest priority of  
10 revenue application, meaning that such payments are the first to be missed if reserves are  
11 insufficient to pay all bills on time. For this reason, BPA expresses its cost recovery goal  
12 in terms of probability of being able to make Treasury payments on time.

13 *Q. The 88 percent/five-year TPP standard implies a 12 percent probability that not all*  
14 *Treasury payments would be made on time and in full. What are the implications of a*  
15 *missed payment to Treasury?*

16 A. A payment is characterized as "missed" even if the amount of the miss is small. Most of  
17 the misses being modeled are limited to principal payments which have the lowest  
18 priority, not interest payments. In our modeling, principal payments scheduled ahead of  
19 due dates (maturity) are missed first, followed by principal that is due, then followed by  
20 Federal interest. Missed principal is rescheduled on a highest interest first basis and  
21 repaid with interest at Treasury market rates. Deferrals of interest payments are  
22 capitalized, assigned the then-prevailing Treasury market rate of interest, and then paid  
23 ahead of previously planned principal payments when financial circumstances improve.  
24 *See* Volume 1, Chapter 12 of Documentation for Revenue Requirement Study,  
25 WP-02-E-BPA-02A for information on modeling in the ToolKit Model.

1 Q. *What direction do the Principles provide on Treasury Payment Probability?*

2 A. The Principle No. 3 states that:

3 “BPA will demonstrate a high probability of Treasury payment in full and on time  
4 over the five-year rate period.

- 5 • A 100 percent probability of Treasury payment is not achievable, but BPA’s new  
6 rates must be designed to maintain or improve TPP, even in the face of the range of  
7 possible fish costs.
- 8 • BPA will demonstrate a probability of Treasury payment in full and on time over the  
9 five-year rate period at least equal to the 80 percent level established in the last rate  
10 case and will seek to achieve an 88 percent level.”

11 The Principle No. 4 states that:

12 “Given the range of potential fish and wildlife costs, BPA will design rates and  
13 contracts which will position BPA to achieve similarly high Treasury payment  
14 probability for the post-2006 period by building financial reserve levels and through other  
15 mechanisms.”

16 Q. *The rate proposal targets an 88 percent TPP target. Why is 88 percent being targeted  
17 rather than the 80 percent or some intermediate percent allowed by Principle No. 3?*

18 A. An 88 percent TPP is being targeted in order to meet a BPA long-standing TPP policy  
19 standard and to fully meet both Principle No. 3 and No. 4.

20 Q. *Please explain what is meant by targeting 88 percent TPP to implement a BPA  
21 long-standing policy standard.*

22 A. In 1993 rate filing, BPA adopted an equivalent TPP standard as a long-term policy.  
23 See Volume 1, Chapter 12 of Documentation for Revenue Requirement Study  
24 WP-02-E-BPA-02. That policy set a standard of achieving a 95 percent probability of  
25 making all Treasury payments during a two-year rate period. See WP-93-A-02, pp. 72.  
26 The reasonableness of this standard was assessed in the 1993 Final Rate Proposal,

1 Administrator's Final Record of Decision. *Id.* at pp. 70-72. In particular, the assessment  
2 was that "... the standard reflects consideration and balancing of BPA's responsibilities  
3 to keep rates as low as possible while ensuring its ability to carry out its legally mandated  
4 responsibilities required under the NW Power Act in a sound and business like manner."  
5 *Id.* at p 71. Adopting the standard set a precedent "that BPA shall adhere to in future rate  
6 cases, absent a determination by the Administrator that the policies should be modified to  
7 meet BPA's changing operating environment." *Id.* at pp. 68.

8 For the 1996 rate proposal, the 95 percent (two-year) standard was translated into  
9 an 88 percent/five-year standard. *See* WP-96-FS-BPA-02A, pp. 555-557. The standard  
10 is an agency-level probability standard that is being applied to the generation function in  
11 this rate proposal.

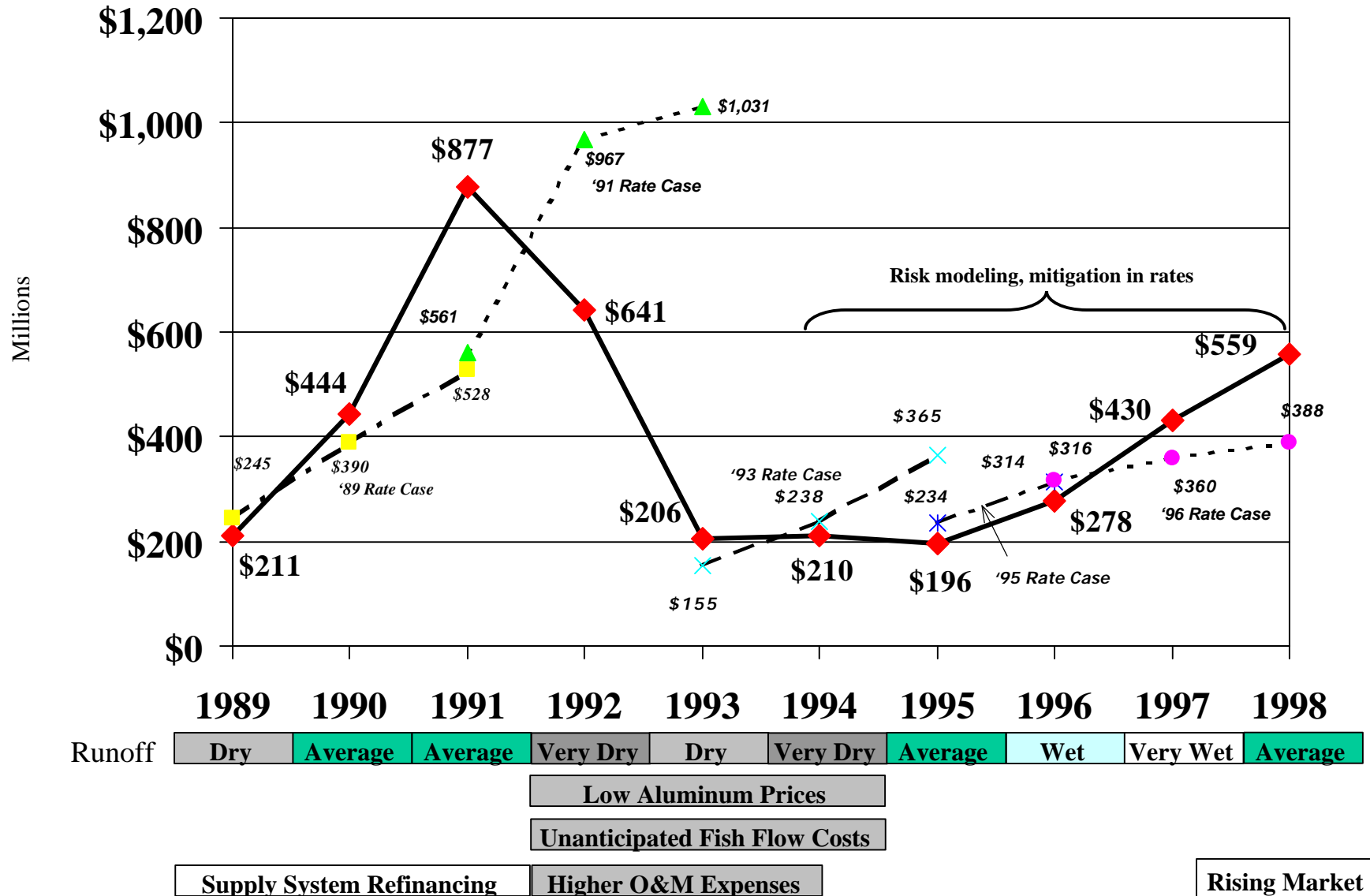
12 *Q. Has BPA implemented the 88 percent standard in rates before?*

13 *A.* No, this is the first time that risk mitigation measures have been included in a rate  
14 proposal to achieve the 88 percent TPP standard. In the 1993 rate case, financial  
15 conditions were such that a ramp-in approach to this standard was taken. Financial  
16 reserves at the time were plummeting due to drought conditions, unanticipated fish flow  
17 costs, and low aluminum prices. Between BPA's initial proposal and supplemental  
18 testimony, BPA's projected year-end FY 1993 reserves dropped from \$364 million to  
19 only about \$90 million. *See* WP-93-A-02, pp. 75. Actual reserves fell by \$670 million in  
20 just two years, from 1991 to 1993. *See* following graph. To mitigate the rate "spike" that  
21 would result from trying to achieve the 95 percent standard in FY 1994 - 1995, BPA  
22 agreed to an 85 percent, two-year TPP on a one-time, phase in basis. Even with this  
23 relaxation of TPP, the average priority firm rate (PF) was increased by 16 percent.  
24 Reserve levels did not begin to recover and rebuild from low levels until FY 1996 and  
25 1997.



# BPA Year End Financial Reserves

- Reserves = cash in BPA Fund plus deferred borrowing balance
- Includes minimum working capital requirement of \$100 million



1 Q. Did BPA implement the 80 percent standard in the 1996 rate filing?

2 A. No, in the 1996 rate proceeding, BPA's price competitiveness, ability to retain customers  
3 and long-term ability to recover costs were in serious question. New alternatives to  
4 Federal power were available for the first time to BPA's customers at prices equal to or  
5 lower than the proposed firm power rates. See WP-96-A-02, pp. 16. BPA's power  
6 customers, and the large industrial customers that many of them serve, all were searching  
7 for new lower cost suppliers. *Id.* New market entrants, low gas prices, and surplus  
8 supplies of short-term capacity and energy in the California and Inland Southwest were  
9 leading to steadily falling electricity prices. *Id.* Failure to meet the competitive challenge  
10 would make it increasingly difficult, and ultimately impossible, for BPA to meet its  
11 statutory mission, including its cost recovery and Treasury repayment obligations. *Id.* at  
12 pp. 20.

13 BPA undertook several actions in the 1996 rate proposal to bolster its ability to  
14 recover costs while maintaining competitive rates, including aggressive cost cutting and  
15 redesign of products and rates. *Id.* at pp. 21-22. In addition, BPA agreed to accept a  
16 level of TPP that was lower than the 88 percent/five-year standard: "Reducing the  
17 Treasury repayment probability for this rate case is one of the steps BPA is proposing to  
18 help maintain competitive rate levels." *Id.* at pp. 85. This lower TPP was accepted  
19 because (1) a rate reduction was deemed necessary to remain competitive, and  
20 competitiveness was essential to long-term ability to recover costs; and (2) in testimony  
21 before Congress, the Administration acquiesced to a lower probability than 88 percent  
22 because of BPA's tenuous competitive position. See WP-96-A-02, pp. 85, and Volume 1,  
23 Chapter 14 of Documentation for Revenue Requirement Study, WP-96-FS-BPA-02A.  
24 BPA's final rates reflected an 80 percent TPP for the five-year rate period,  
25 FY 1997-2001.

1 *Q. Are the conditions that led BPA to relax the TPP target in 1993 and 1996 present today?*

2 A. No. Contrary to conditions in 1993, financial reserves are not plummeting, but are  
3 building at a higher rate than assumed when rates were last set, largely because hydro  
4 conditions have been better than average. In addition, BPA is not proposing a substantial  
5 rate increase as in the 1993 rate proposal; indeed, BPA is proposing to no increase in the  
6 average level of PF power rates over what they are today. *See* Burns and Elizalde, *et al.*,  
7 WP-02-E-BPA-08. This effectively continues the rate reduction from FY 1993 and  
8 FY 1995 levels that BPA undertook in its 1996 filing. Further, BPA's competitive  
9 position is more stable than anticipated in the 1996 rate filing, as market price  
10 expectations have risen, BPA has demonstrated its ability to control costs, and demand  
11 has increased for firm power products (*Id.*).

12 *Q. You indicated that an 88 percent TPP is being targeted rather than a lower percent to be*  
13 *able to implement both the Principle No. 3 and No. 4. Please explain.*

14 A. Principle No. 3 calls for 88 percent as the TPP goal, which is to say, the TPP percent that  
15 BPA should set rates to achieve unless there is compelling reason to target a lower  
16 percent. In our judgment, there is no such compelling reason.

17 *Q. Why do you conclude that there is no compelling reason to target a TPP level that is lower*  
18 *than the 88 percent goal called for in the Principles?*

19 A. First, as noted, the conditions prevailing in the 1993 and 1996 rate cases that caused the  
20 Administrator to target a lower TPP than 88 percent are not present now. Indeed, BPA's  
21 costs are significantly below market price expectations, no increase in the average PF is  
22 being proposed, and apparent demand for Subscription products is high. Second,  
23 Principle No. 5, which sets a goal that BPA avoid a wholesale rate increase, is met with a  
24 TPP goal of 88 percent (*see* Burns and Elizalde, WP-02-E-BPA-08). Third, BPA is  
25 proposing a DDC that enables the Administrator to make rebates and other distributions  
26 to customers and other stakeholders if reserves accumulate to levels higher than needed

1 to mitigate risks. *See* Volume 1, Chapter 12, Appendix 2 of Documentation for Revenue  
2 Requirement Study, WP-02-E-BPA-02A. Fourth, the Principles are intended to work in  
3 conjunction with each other, and in the judgment of the Administrator and concerned  
4 Executive Branch agencies, Principle No. 4 would not be satisfied if the 88 percent TPP  
5 goal in Principle No. 3 were relaxed.

6 *Q. Why is the proposed DDC a factor that leads one to conclude that there is no compelling*  
7 *reason to relax the 88 percent TPP?*

8 *A.* There is significant “upside” uncertainty that may cause net revenues to accumulate to  
9 levels higher than needed. If hydro, market price, and other risks do not materialize, and  
10 costs are not significantly higher or revenues significantly lower than planned, BPA’s  
11 generation function may accumulate reserves in excess of its long-term needs. For this  
12 reason, BPA is proposing the DDC. The DDC would allow the Administrator to  
13 distribute dividends to customers and other stakeholders if reserves reach \$1.2 billion,  
14 and if conditions prevailing at the time indicate that the 88 percent, five-year TPP  
15 standard would still be met without accumulation of additional reserves. *See* Volume 1,  
16 Chapter 12, Appendix 12 of Documentation for Revenue Requirement Study,  
17 WP-02-E-BPA-02A. The DDC is intended to ensure that no “over-recovery” occurs with  
18 implementation of the 88 percent TPP standard.

19 **Section 5. Dividend Distribution Clause (DDC)**

20 *Q. BPA’s Power Subscription Strategy proposed criteria and mechanisms for distributing*  
21 *“dividends” among stakeholders if actual financial performance turns out to be*  
22 *substantially better than the rate case plan. Please explain.*

23 *A.* Because BPA faces so much uncertainty, we are proposing a mechanism, the CRAC, to  
24 increase rates and revenues temporarily if net revenues fall off significantly. *See* risk  
25 mitigation panel of Lovell, Sapp, and Lefler. Since net revenues also could build to a  
26 higher level than needed to ensure longer-term costs will be recovered, we’re proposing a

1 mechanism the DDC to distribute dividends to firm power customers and other  
2 stakeholders.

3 BPA is proposing terms and criteria for triggering a distribution of “dividends” if  
4 net revenues at the end of any fiscal year of the rate period accumulate to \$500 million  
5 starting with net revenues in FY 1999, and if projections at the time indicate that the  
6 88 percent/five-year TPP standard would be met with a distribution. *Id.*

7 *Q. What is the basis for the \$500 million threshold level?*

8 A. The threshold is defined as an accumulation of actual net revenues from FY 1999 forward  
9 of \$500 million. This threshold is equivalent to \$1.2 billion in financial reserves. Only  
10 net revenues attributed to the generation function are included using the ToolKit model,  
11 this threshold is the lowest level that is consistent with the 88 percent TPP standard,  
12 given the risks and risk mitigation measures in this rate proposal. *Id.*

13 *Q. How often could the distributions occur, and how large could they be?*

14 A. The distributions could occur as frequently as each year of the five-year rate period.  
15 The maximum size of the dividend distribution is the amount by which actual  
16 accumulated net revenues attributable to the generation function exceed the threshold.  
17 The Administrator retains discretion to not trigger a distribution even if the threshold  
18 were met, or to reduce the size of the distribution from the maximum, if he/she deems  
19 that to be necessary to meet the TPP standard (or equivalent replacement financial  
20 criteria) over the ensuing five years. The Administrator exercises this discretion based on  
21 a five-year forecast of revenues, expenses, and TPP. If the threshold is met, a public  
22 consultation required before decisions are made on whether a distribution will occur and  
23 how much will be distributed.

24 *Q. How will dividends be allocated?*

25 A. The first \$15 million of any dividend is committed to customers who have been  
26 participating in the Conservation and Renewable Discount (C&R Discount).

Criteria for dividing and allocating any remaining dividend among other customers and stakeholders are not being proposed or decided in this rate proposal. Rather, BPA plans to conduct a public consultation process prior to the beginning of the FY 2002 - 2006 rate period for the purpose of establishing criteria for dividing and allocating any dividends among other customers and stakeholders.

*Q. Please explain your statement regarding the first \$15 million going to the C&R Discount.*

A. In addition to the base conservation and renewable discount level of 0.5 mill/kWh included in this rate proposal (which results in about \$30 million with current load assumptions), the Administrator is proposing that the first \$15 million of any “dividend” be made available for these same public purposes (i.e., incremental conservation, renewable resources, and low-income weatherization). This is an important part of the Subscription Strategy goal of spreading the benefits of the FCRPS as broadly as possible. BPA is proposing to use the C&R Discount mechanism for crediting eligible customer power bills for this \$15 million. *See* Chapter 2.9 of the Wholesale Power Rate Development Study, WP-02-E-BPA-05.

*Q. How would dividends allocated to firm power customers be distributed?*

A. The amount allocated to firm power customers would be divided by the DDC Revenue Base, which is the average generation revenues from the prior three years of all applicable rates/loads, to arrive at a percentage. That percentage would be applied to each applicable rate, and would be credited on power bills. *See* Chapter 12, Appendix 2 of Documentation for Revenue Requirement Study, WP-2-E-BPA-02A for applicable rates.

## **Section 6. Functionalization of Costs**

*Q. Have there been changes to the manner in which costs have been functionalized in order to develop revenue requirements for this wholesale power rate case and the subsequent transmission rate case?*

1 A. Yes. There have been minor changes to the way certain expenses and capital costs have  
2 been functionalized.

3 *Q. What changes have been made in the functionalization of expenses?*

4 A. There are three areas in which expenses have been functionalized differently from  
5 previous rate cases. First, the separation of BPA into PBL and Transmission Business  
6 Line (TBL) has simplified the functionalization of the Power Marketing and Power  
7 Scheduling programs. Previously, we had to estimate the portions of the component  
8 activities associated with generation or transmission based on an analysis of actual costs.  
9 Now, the functional separation of BPA and the separate budgeting done by the business  
10 lines has provided the functionalization of these costs. Second, Administrative and  
11 Support Services (corporate overheads) were previously distributed to expense  
12 (and capital) programs and then functionalized on the same basis as the programs to  
13 which they had been distributed. The primary basis now is to assign the Administrative  
14 and Support Services expense to the business lines, rather than to individual programs,  
15 thereby performing the functionalization in that assignment (*see* below for discussion).  
16 Third, the interest credit on BPA's projected cash balances previously had been  
17 functionalized based on the results of the separate accounting analysis from the previous  
18 year (actual or forecasted). Now, the interest credit is based on the specific cash balances  
19 attributed to the PBL and TBL. In this proposal, the resulting generation annual cash  
20 balances determined by the ToolKit model are used to calculate the credits used in the  
21 development of the generation revenue requirements.

22 *Q. What changes have been made to the manner in which capital costs are functionalized?*

23 A. Capital costs encompass BPA, COE, and Reclamation plant investment. For BPA, the  
24 functionalization of general plant investment has been affected by the asset allocation  
25 process that occurred as a result of the separation into PBL and TBL. The accounts for  
26 office furniture and fixtures, data processing hardware and data processing software,

1 which had been functionalized based on the functional disposition of the historical year  
2 O&M expenses, have been divided between the business lines based on the number of  
3 units utilized, thereby providing the functionalization in the accounting system. All other  
4 general plant accounts were assigned to the TBL, although some of these require  
5 functionalization for ratemaking purposes. For communications equipment, aircraft, and  
6 metering stations, which also had been functionalized based on historical year O&M, and  
7 the accounts comprising the Dittmer Control Center, previously functionalized based on a  
8 direction of effort study, the functionalization is accomplished now by a usage charge  
9 (between business line expense) from TBL to PBL based on their direct use or use on  
10 their behalf. These changes are reflected in the association of capital funding in  
11 repayment studies, described below. The remaining general plant accounts were  
12 functionalized to transmission, reflecting their support to the O&M of the transmission  
13 system, which was also how they were functionalized in previous rate cases.

14 In the case of COE and Reclamation plant investment, now that costs associated  
15 with transmission facilities for generation integration, which transmit power from the  
16 generators to the main grid of the transmission system, are assigned directly to the  
17 generators (*see* DeClerck, *et al.*, WP-02-E-BPA-27), those costs have been included in  
18 generation directly. Since that is the bulk of COE/Reclamation transmission investment,  
19 the transmission appropriated repayment obligations of the COE/Reclamation were  
20 moved to the generation repayment study, as described below. For the remaining  
21 transmission investment in the network and delivery segments of the transmission  
22 system, the annual costs (O&M, depreciation, and interest expenses) are developed and  
23 charged to the TBL in whose rates they will appear. The inter-business line revenues  
24 from this annual charge appear as a revenue credit against the generation revenue  
25 requirements.



1 Q. *Are there any other changes that are functionalization related?*

2 A. The GTAs, related to the delivery of Federal power over non-Federal transmission  
3 systems, now are functionalized to generation as the costs of services acquired by the  
4 power merchant organization. Previously, these costs were functionalized to  
5 transmission, segmented, and assigned directly to the appropriate power rates. Similarly,  
6 the estimated cost associated with BPA generation integration facilities are charged  
7 directly to the marketing organization through an inter-business line charge.

8 Q. *How are the business lines' responsibilities for BPA's administrative and support service*  
9 *costs determined?*

10 A. The business lines' responsibilities for BPA's administrative and support service costs  
11 (i.e., the functionalization thereof) is based on their particular demand for services as well  
12 as on allocations. Recently, BPA has implemented a "Shared Services" concept, in  
13 which services that are common to the agency are provided through central organizations  
14 in an effort to reduce costs and gain efficiencies from centralized services. The Shared  
15 Services costs are moving to direct charge mechanisms to better reflect the full cost and  
16 actual use of these services by the business lines. Those costs not directly associated with  
17 a direct service to the business lines, such as support from executive management, will  
18 continue to be allocated to the PBL and TBL.

19 Q. *How is direct charging different than an allocation methodology?*

20 A. Under a direct charge methodology, each product and service carries a known rate, which  
21 is charged at the time of delivery. Each product and service is requested before delivery  
22 with the rate being charged to the receiving business line. BPA costs that result from any  
23 difference between the actual rate and the forecasted rate are allocated to the business  
24 lines. BPA's Shared Services Board is committed to reviewing actual versus planned  
25 demand for its services and will make adjustment to the level of services provided in  
26 order to continue reducing costs and managing efficiencies. The allocation methodology

utilizes fixed percentages set at the beginning of the year to assign costs to the various BPA programs. These percentages are predetermined based on historical information or direction of effort studies.

*Q. What methodology was used to functionalize BPA's administrative and support service costs for the development of revenue requirements?*

A. Since FY 1999 is the first year of implementing this shared service concept, it served as the basis for the forecasts for FY 2002 through 2006. The responsibilities of the business lines reflected in accounting for FY 1999 were used to determine percentages of the total administrative and support service costs. The FY 1999 percentages were then multiplied by the forecasts of BPA's administrative and support service costs. The annual results of this calculation for the PBL were used as the Administrative and Support Services included in generation revenue requirements. Similarly, the transmission components will be used in the development of revenue requirements in the subsequent transmission rate case.

## **Section 7. Technical Changes in Repayment Studies**

*Q. What other changes have been made in the Repayment Program and the Repayment Studies since BPA's 1996 rate filing?*

A. No changes have been made to the Repayment Program itself. We have removed the COE and Reclamation O&M from the repayment study data bases because these are no longer funded through appropriations are no longer reimbursable to Treasury. BPA now direct-funds the power O&M of the COE and Reclamation. The only purpose for including appropriated O&M in the repayment study was for the interest credit calculated by the program based on the funds necessary to make the year-end Treasury payment.

As described in Section 6, COE and Reclamation transmission-related repayment obligations, a total of \$67,080,000 with a weighted average interest rate of 7.13 percent, were moved from the transmission study to the generation study. Likewise, the portions

1 of construction bonds functionalized to generation were revised to reflect the BPA asset  
2 allocation described in Section 6. As a result, a total of \$32,065,000 with a weighted  
3 average interest rate of 7.3 percent, was moved from the generation study to the  
4 transmission study.

5 *Q. Does this study reflect the actual implementation of the BPA Appropriations Refinancing*  
6 *Act?*

7 A. The 1996 Final Rate Proposal included projections of the Bonneville Refinancing Act,  
8 which was passed in April of 1996. In 1997, after audited actual financial data was  
9 available, BPA calculated the refinancing transaction and forwarded a demonstration of  
10 the calculations to the Treasury for their review. They approved the transaction  
11 calculations in July of 1997. The repayment study in this rate proposal reflects the actual  
12 transaction. *See* Volume 1, Chapter 8 of Documentation for Revenue Requirement  
13 Study, WP-2-E-BPA-02A.

14 **Section 8. Anticipated Adjustments to Final Rate Proposal**

15 *Q. Are there any significant changes that you may factor into the Revenue requirements*  
16 *Study for Final Rate Proposal?*

17 A. Yes. FY 2001 ending reserve estimates may be updated for the Final Rate Proposal,  
18 which could affect such things as actual FY 1999 reserves, interest credit amounts, key  
19 ToolKit data assumptions, and probability results. Capitalized contract debt service  
20 streams in repayment studies may be updated to reflect any new refinancings.

21 Repayment study and depreciation forecasts may be updated to reflect FY 1999  
22 actual results. The COE and Reclamation budget data may be updated.

23 *Q. Does that conclude your testimony?*

24 A. Yes.  
25  
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